

WHAT IS CLAIMED AS NEW AND IS INTENDED TO BE SECURED BY A
LETTERS PATENT IS:

- 5 1. A sinter powder for selective laser sintering, which comprises:
 at least one polyamide and at least one poly(N-methylmethacrylimide) (PMMI), one
polymethyl methacrylate (PMMA), and/or one PMMI-PMMA copolymer.
2. The sinter powder as claimed in claim 1, which further comprises:
10 a polyamide which comprises at least 8 carbon atoms per carboxamide group.
3. The sinter powder as claimed in claim 1, which further comprises:
 an unregulated polyamide.
- 15 4. The sinter powder as claimed in claim 1, which further comprises:
 at least one nylon which is selected from the group consisting of nylon-6,12, nylon-11,
 nylon-12, a copolyamide; wherein said copolyamide is based on the named nylons, and
 mixtures thereof.
- 20 5. The sinter powder as claimed in claim 1, wherein the PMMI, PMMA and/or
 PMMI-PMMA copolymer ranges from 0.01 to 30 wt. %, which is based on the entirety of the
 polymers present in the powder.
6. The sinter powder as claimed in claim 1, wherein the PMMI, PMMA and/or
25 PMMI-PMMA copolymer ranges from 0.5 to 15 wt. %, which is based on the entirety of the
 polymers present in the powder.
7. The sinter powder as claimed in claim 1, which further comprises a mixture of
 particles of PMMI, of PMMA, or of PMMI-PMMA copolymer, with particles of polyamide.
- 30 8. The sinter powder as claimed in any of claim 1, which further comprises
 polyamide particles into which PMMI, PMMA, and/or PMMI-PMMA copolymer has been
 incorporated.

9. The sinter powder as claimed in claim 1, which further comprises one or more auxiliary, and/or filler, and/or pigment.

10. The sinter powder as claimed in claim 9, wherein the auxiliary comprises a
5 flow auxiliary.

11. The sinter powder as claimed in claim 9, wherein the filler comprises glass particles.

10 12. The sinter powder as claimed in claim 9, wherein the filler comprises aluminum particles.

13. A process for preparing the sinter powder as claimed in claim 1, which comprises:

15 mixing at least one polyamide with at least one PMMI, one PMMA, and/or one PMMI-PMMA copolymer.

14. The process as claimed in claim 13, which further comprises
mixing a polyamide powder obtained by reprecipitation or milling, in suspension or in
20 solution in an organic solvent, or in bulk, with PMMI, PMMA, or PMMI-PMMA copolymer.

15. The process as claimed in claim 13, which further comprises
compounding the PMMI, PMMA, and/or PMMI-PMMA copolymer into a melt of
polyamide; followed by
25 milling the resultant mixture to give a laser sinter powder.

16. A process for producing moldings, which comprises:
selectively laser sintering the sinter powder as claimed in claim 1.

30 17. A molding produced by laser sintering, which comprises:
at least one PMMI, one PMMA, and/or one PMMI-PMMA copolymer, and at least one polyamide.

18. The molding as claimed in claim 17, which further comprises a polyamide which has at least 8 carbon atoms per carboxamide group.

19. The molding as claimed in claim 17, which further comprises nylon-6,12, nylon-11 and/or nylon-12.

20. The molding as claimed in claim 18, which further comprises nylon-6,12, nylon-11 and/or nylon-12.

21. The molding as claimed in claim 17, wherein the PMMI, PMMA and/or PMMI-PMMA copolymer ranges from 0.01 to 30 wt. %, which is based on the entirety of the polymers present in the powder.

22. The molding as claimed in claim 17, wherein the PMMI, PMMA and/or PMMI-PMMA copolymer ranges from 0.5 to 15 wt. %, which is based on the entirety of the polymers present in the powder.

23. The molding as claimed in claim 17, which further comprises fillers and/or pigments.

24. The molding as claimed in claim 23, wherein at least one of the fillers is glass particles.

25. The molding as claimed in claim 23, wherein at least one of the fillers is aluminium particles.